

Family Functioning, Personality Traits, and Imposter Phenomenon in University Students

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The aim of study was to determine the relationship of family functioning, personality traits, and imposter phenomena in university students. The sample comprised 400 students, recruited from one government sector and two private sector universities through purposive sampling. The data was collected by using a demographic questionnaire, Family Assessment Device – General Functioning Scale (Epstein et al., 1983), The Big Five Inventory (John et al., 1991), and Clance Impostor Phenomenon Scale (Clance, 1985). The questionnaires were administered after taking informed consent from the participants. The results revealed that personality traits such as conscientiousness, and neuroticism were significantly related to imposter phenomena while among the covariates number of semester and family income were significantly related with imposterism. Family income and neuroticism were significant predictors of imposterism among university students. Moreover, family functioning is likely to moderate the relationship between personality trait (openness to experiences) and imposter phenomena. It could be concluded that individuals with unhealthy family functioning and higher neuroticism will experience more imposterism so psychotherapy such as family therapy and cognitive behavior therapy could be provided to reduce experience of negative emotional states in university students.

Keywords. Personality traits, family functioning, imposter phenomena

Sharp and Theiler (2018) reported that psychological distress is more prevalent in university students than general population. Various factors are associated with psychological distress in university students. One of these factors is imposterism. *Imposterism* is defined as feelings of inadequacy, and the inability to internalize achievement. Fassi and colleagues (2020) reported that imposterism is associated with psychological distress in university students. Moreover, imposterism is

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linked with suicidal ideation (Brennan-Wydra et al., 2021). Therefore, it is very important to investigate imposterism in university students as it can affect wellbeing of university students. Another factor that directly affects development of imposterism in young adults is family. A systematic review pointed out that low parental care, authoritarian parenting, gender-based differences, and over-protectiveness are related with development of imposterism in children (Yaffe, 2023). Moreover, family plays an important role in personality development of young adults by encouraging desirable behaviors and discouraging undesirable behaviors. Additionally, personality traits are linked with development of imposterism. Research has reported that imposterism is negatively related to extraversion, agreeableness, and conscientiousness and positively related with neuroticism (Sawant et al., 2023). Consequently, it is important to study role of personality traits and family functioning in the development of imposterism in university students.

Personality can be defined as a combination of feelings, thoughts, and behaviors that distinguish an individual from others (Bergner, 2020). Big-Five factors of personality are neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness. It was reported that neuroticism is positively related to imposterism, while extraversion, agreeableness, and conscientiousness are negatively related to it. Contrarily, openness to experience was not related to imposterism (Kaur & Jain, 2022).

Family influences personality development of children. *Family functioning* can be defined as a process in which family members interact to fulfill basic needs, establish rules, make decisions, and define goals (Bozoglan, 2019). Family environment can be evaluated from family functioning. Family environment includes role, assignment, communication patterns, emotional connectedness, and problem solving among members of family unit (Kissane & Zaider, 2022). Family is considered as a system and functioning of system can be evaluated. Family functioning effect development of young adults (Zelege, 2015) and it is associated with mental health problems (Milburn et al., 2019). Family functioning plays significant role in the development of imposter phenomena. The literature showed that parental emphasis on achievement and over-protection are related to the development of imposterism (Yaffe, 2023).

Apart from the role of personality and family environment, every individual strives to achieve something in life which could provide them with a sense of comfort and boost their confidence. It is studied that some people get satisfaction from their achievements, while for others achievement may be a cause of distress because they think that

their achievement is not real. This phenomenon is termed as imposter phenomena. Imposterism can be defined as a belief that one does not deserve success. It is characterized by self-doubt (Jackson, 2018). Imposterism affects mental health of university students. It is linked with low self-esteem, anxiety, and depression (Naser et al., 2022). Hence, it is important to study imposterism in university students.

Individual experiences in environment are also very important in shaping personality and belief system. Family is the most important component of the environment so it is the direct need of time to explore the role of family and personality in the development of imposter phenomena so that proper intervention could be planned to reduce their effect and improve the functioning of individuals by minimizing imposterism.

Objectives

1. To examine relationship among personality traits, family functioning, and imposterism in university students.
2. To investigate gender differences on imposterism, personality traits, and family functioning among university students.

Hypotheses

1. There is positive relationship between neuroticism, family dysfunctioning, and imposterism in university students.
2. There is negative relationship of conscientiousness, agreeableness, extraversion, and openness to experience with imposterism in university students.
3. Family dysfunctioning and neuroticism predict imposterism positively while conscientiousness, agreeableness, extraversion, and openness to experiences predict imposterism negatively in university students.
4. Family dysfunctioning moderates the relationship between personality traits and imposter phenomena.

Method

Research Design

Cross-sectional research design is used to examine the relationship of personality traits, family functioning, and imposterism in university students.

Participants

The sample comprised 400 university students (determined through G power analysis) with the age range of 19-24 years ($M = 21$; $SD = 2.34$) selected through purposive sampling strategy. Data were collected from one government and two private sector universities ($n_{\text{gov}} = 200$, $n_{\text{private}} = 200$). Only those universities were selected that have greater number of students to ensure the representativeness of the sample. The departments were divided into faculties and number of departments for data collection. Number of students was kept equal for every faculty to increase the representativeness of the sample. The sample consisted of equal number of male and female participants (200 each). Only those students were included who were registered in regular programs and had CGPA higher than 3.3. Students suffering from any major physical illness, psychological illness or physical disability were excluded.

The demographic characteristics indicated that age range of the participants was 19-24 years ($N = 400$). The mean age of the participants was 21 years ($SD = 2.34$). Majority of the participants belonged to nuclear family system and the income of families mostly ranged between 40,000/- to 150,000/- PKR. Thirty-seven participants were in first semester; 31 participants were in second semester; 124 participants were in third semester; 48 participants were in fourth semester; 99 participants were in fifth semester; 21 participants were in sixth semester; 37 participants were in seventh semester; and 3 participants were in eighth semester.

Measures

Family Assessment Device – General Functioning Scale (Epstein et al., 1983)

Family Assessment Device was administered to assess the family functioning of the participants. It consists of 12 items. The response category is based on four-point Likert scale which ranges from 1= *strongly agree* to 4 = *strongly disagree*. All the odd items are reverse coded. The total score is obtained by the addition of all items' scores and dividing by the number of items. Average of 1 indicates healthy while 4 indicates unhealthy family functioning. Higher scores indicate unhealthy family functioning. Alpha reliability of General Functioning Scale is .92 (Epstein et al., 1983). The alpha reliability coefficient for the present study was found to be .74.

The Big Five Inventory (John et al., 1991)

This scale was administered to evaluate the personality traits of the participants. It has 44 items employing Likert scale ranging from *disagree strongly* (1) to *agree strongly* (5) developed by John et al., (1991). It comprises five major dimensions of personality which are known as the Big-Five Factors. These dimensions include Extraversion (8 items), Agreeableness (9 items), Conscientiousness (9 items), Neuroticism (8 items), and Openness to Experiences (10 items). Sixteen items were negatively scored items. The score for each dimension is obtained by averaging the score for each dimension. The alpha coefficient for the current study was found to be .75 for Extraversion, .80 for Agreeableness, .73 for Conscientiousness, .82 for Neuroticism and .71 for Openness to Experiences.

Clance Impostor Phenomenon Scale (Clance, 1985)

This scale was used to assess imposterism in participants. It comprises 20-items that identify (a) Fear of Evaluation, (b) Fear of Gaining Success Again, and (c) Fear of Having Less Capability than Others. Response category was based on 5-point Likert scale varying from 1 (*not at all true*) to 5 (*very true*). Total scores are obtained by summing all items. The Clance Impostor Phenomena Scale investigates fear of failure, ignoring of credit from others, fear of assessment, and fear that prior accomplishments cannot be repeated (Langford & Clance, 1993). The Scale was found to have excellent reliability with a Cronbach alpha coefficient .96 (Holmes et al., 1993). The alpha reliability for the current study was found to be .70.

Procedure

Initially, permissions were taken from authors of the scales for using the measuring instruments in the current study. The participants were approached in the departments after taking permission from their respective departments. After taking informed consent from the participants, data were collected from 400 university students within the period of three months. All ethical considerations were followed during data collection, analysis and reporting of the results including assurance of confidentiality of data and anonymity of the identity of the participants. Analyses were run on the data by using Statistical Package for Social Sciences (SPSS) version 23.

Results

It was hypothesized that there is likely to be positive relationship between neuroticism, family dysfunctioning, and imposterism in university students. While negative relationship among conscientiousness, agreeableness, extraversion, openness to experiences, and imposterism among university students was postulated. Inferential statistics (Pearson Product Moment Correlation) was used to explore the relationship among personality traits, family functioning and imposterism.

Table 1: *Correlation Among Demographics, Family Dysfunctioning, Personality Traits, and Imposterism (N = 400)*

Variables	1	2	3	4	5	6	7	8	9
1 Semester	-	.05	-.04	-.05	-.03	.04	-.09	-.09	.11*
2 Family income		-	.20**	.13*	.10	.12	-.10	.06	-.14*
3 Family Dysfunctioning			-	-.23**	-.32**	-.28	.09	-.20**	.04
4 Extraversion				-	.21**	.12*	-.25**	.17**	-.09
5 Agreeableness					-	.23**	.03	.43**	-.08
6 Conscientiousness						-	-.29**	.14**	-.13*
7 Neuroticism							-	.23**	.25**
8 Openness								-	.08
9 Imposterism									-

** $p < .01$. * $p < .05$.

Table 1 indicates that among personality traits, conscientiousness is significantly negatively related to imposterism, while neuroticism is significantly positively related with imposterism. Extraversion, agreeableness, and openness to experience have nonsignificant relationship. Table 1 also indicates number of semesters has significant positive relationship with imposterism. Moreover, family income is negatively associated with imposterism. Family dysfunctioning has nonsignificant relationship with imposterism. Family dysfunctioning has significant negative relationship with all personality traits of Big-Five except with neuroticism which is nonsignificant positive.

Furthermore, it is assumed that family dysfunctioning and neuroticism are likely to predict imposterism positively while conscientiousness, agreeableness, extraversion, and openness are likely to predict imposterism negatively in university students. For testing this hypothesis hierarchical regression was applied. Results are shown in

Table 2. Using the multiple hierarchal method of regression analysis, two significant models emerged as shown in **Table 2**. Model 1 accounts for 2% variance while Model 2 accounts for 10% variance in predicting imposter syndrome. It indicates low family income predicts high imposterism in Model 1, while only neuroticism positively predicts imposterism. None of the other variables predicted imposterism.

Table 2: Multiple Hierarchical Regression Indicating Predictors of Imposterism ($N = 400$)

	Imposter Phenomenon				
Predictors	<i>B</i>	<i>SE</i>	<i>B</i>	95% CI	
				LL	UL
Model I					
Constant	60.18	1.40		57.43	62.94
Semester	.09	.32	.45	-.17	1.07
Family Income	-.14*	.00	.01	.00	.00
<i>R</i> ²	.02				
<i>F</i>	3.87*				
Model II					
Constant	43.35	7.31		28.96	57.74
Family Dysfunctioning	.06	.09	.10	-.08	.28
Agreeableness	.15	.10	.09	-.04	.35
Consciousness	-0.02	.12	-.05	-.28	.19
Neuroticism	.25***	.12	.42**	.19	.66 6
<i>R</i> ²	.10				
ΔR^2	.08				
<i>F</i>	4.39***				

Note. β = Unstandardized Co-efficient; CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Moreover, it was assumed that personality traits are likely to moderate the relationship between family functioning and imposter phenomena. Process Macro was used to check moderation.

Table 3: *Family Functioning as Moderator Between Personality Traits and Imposter Phenomena (N = 400)*

Variables	Imposter Phenomena		
	<i>B</i>	95% CI	
		LL	UL
Constant	105.67***	81.15	130.19
Openness to experience	-1.02***	-1.58	-.42
Family Functioning	-17.81***	-27.39	-8.30
Openness x Family Functioning	.65***	.34	.95
R^2	.09		
F	16.96***		
ΔR^2	.04		
Constant	80.22	56.86	103.57
Extraversion	-.48	-1.17	.21
Family Functioning	-2.19	-8.33	3.95
Extraversion x Family Functioning	.19	-.09	.46
R^2	.05		
F	1.81		
ΔR^2	.01		
Constant	67.69	49.11	86.27
Agreeableness	-.02	-.18	.14
Family Functioning	2.25	.78	3.73
Agreeableness x Family Functioning	-.02	-.06	.02
R^2	.05		
F	1.13		
ΔR^2	.03		
Constant	67.27***	43.88	90.67
Conscientiousness	.09	-.48	.68
Family Functioning	3.15	-3.57	9.88
Conscientiousness x Family Functioning	-.05	-.29	.20
R^2	.22		
F	.14		
ΔR^2	.01		
Constant	72.79	53.44	92.15
Neuroticism	-.16	-.50	.17
Family Functioning	.45	-3.49	4.39
Neuroticism x Family Functioning	.06	-.09	.21
R^2	.05		
F	.59		
ΔR^2	.02		

Note. *B* = Unstandardized Co-efficient.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3 shows that family functioning play a significant role in shaping the relationship between openness to experience and imposter phenomenon. Specifically, openness to experience is generally associated with lower imposter feelings, but this protective effect varies depending on the quality of family functioning. When family functioning is weaker, openness to experience more strongly reduces imposter feelings, highlighting its compensatory role in the absence of family support. However, when family functioning is strong, the additional contribution of openness to experience becomes less pronounced, suggesting that supportive families already provide a buffer against imposter experiences. For the other personality traits, including extraversion, agreeableness, conscientiousness, and neuroticism, family functioning does not significantly alter their relationship with imposter phenomenon, indicating that the moderating effect is unique to openness to experience. This pattern underscores the importance of considering both individual personality characteristics and family context in understanding the dynamics of imposter experiences. Furthermore, to study gender difference independent sample *t*-test was applied. Results are shown in Table 4.

Table 4: *Independent Sample t-Test Indicating Gender Differences on Study Variables in University Students (N = 400)*

Variables	Male Students (n = 200)	Female Students (n = 200)	<i>t</i> (398)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			LL	UL	
Imposterism	60.7(8.7)	61.4(9.3)	-.77	.41	-2.4	1.1	.07
Openness	28.21(4.5)	29.68(4.4)	-3.2	.001	-2.3	-.57	.34
Neuroticism	23.77(4.5)	25.81(4.7)	-4.3	.001	-2.9	-1.1	.40
Conscientiousness	28.83(4.5)	27.75(4.5)	2.3	.02	.18	1.9	.24
Agreeableness	30.17(5.2)	31.10(5.7)	-1.6	.09	-2.0	.15	.17
Extraversion	27.72(4.3)	26.93(4.8)	-.45	.65	-1.1	.69	.17
Family Functioning	25.34(5.6)	26.95(5.7)	-1.0	.28	-1.7	.50	.30

Table 4 shows that there are significant gender differences on openness, neuroticism, and conscientiousness. Girls are scoring significantly high on openness to experience and neuroticism while boys are scoring high on consciousness. Effect size is also weak to medium.

Discussion

The present research aimed to investigate the relationship of personality traits, family functioning, and imposterism in university students. Additionally, aim was to identify the predictor of imposterism from covariates, personality traits and family functioning.

From the covariates, family income was found to be significantly negatively related with imposterism, and it was also found to be significant negative predictor of imposterism which means that low socioeconomic status of the family predicts more imposterism in individuals. These findings are in accordance with the previous studies which indicated that imposterism was more prevalent in families having low income (MacInnis et al., 2019). It could be argued that individuals with low socioeconomic status are deprived of many facilities of life thus achievement is important for them to get facilities and recognition. Apart from this need of achievement, there is accompanying fear that whether their achieved success is real or not which is a core symptom of imposter phenomena.

Furthermore, among the personality traits, conscientiousness is significantly negatively related while neuroticism is significantly positively related with imposterism. Additionally, neuroticism is also found to be a significant positive predictor of imposterism. These findings are supported by the previous literature on the topic which suggests that high neuroticism and low conscientiousness are related with more imposterism (Sawant et al., 2023). Likewise, Kaur and Jain (2022) reported that neuroticism is positively related with imposterism while conscientiousness is negatively related with it.

It was assumed that family functioning is likely to moderate the relationship between personality traits and imposter phenomena. The results show that family functioning significantly moderate the relationship between personality traits (openness to experiences) and imposter phenomena. Similar findings are reported in the literature (Yaffe, 2022). Openness to experience as a personality trait relates to an individual's receptiveness to new ideas and self-exploration, which may interact with family dynamics. Positive family functioning likely buffers the negative self-perceptions connected to imposter feelings in individuals high or low in openness. Collectivism, close family bonds, and social duties are frequently emphasized in Pakistani homes, and these factors influence how people express and their sense of self-efficacy. Higher openness to experience that us creativity and readiness to try new things can cause imposter syndrome in people whose identity and self-confidence are challenged by rigid traditional norms,

high expectations, or a lack of emotional expressiveness in their families.

In contrast, the other personality traits; extraversion, agreeableness, conscientiousness, and neuroticism did not show significant moderation by family functioning. Extraversion and agreeableness primarily influence interpersonal interactions, which may not directly translate into imposter feelings unless reinforced by family context; conscientiousness reflects discipline and goal-directed behavior, which may operate independently of family dynamics in predicting imposter experiences; and neuroticism, while strongly linked to self-doubt and anxiety, is often an enduring vulnerability less easily mitigated by external family support.

Additionally, it was postulated that females are likely to score more on imposterism than males in university students. Contrarily, the results showed significant gender differences on openness, neuroticism, and conscientiousness, while non-significant gender differences on imposterism in university students in consistence with the past research evidence ([Fassl et al., 2020](#)). [Hofmann et al. \(2025\)](#) also reported significant gender differences on openness, neuroticism, and conscientiousness. These results are consistent with the specific gender role norms that are common in Pakistan. In addition to being linked to higher neuroticism as a result of societal pressures and gender-based stresses, women are frequently expected by society to do household duties, which influences conscientiousness and agreeableness. These findings highlight that while gender may not play a defining role in the experience of imposterism, it continues to influence the expression of certain personality traits, thereby offering important insights into the complex interplay of gender, personality, and self-perceptions in academic settings.

Conclusion

It can be concluded from the results that number of semesters, family income, and personality traits such as neuroticism and conscientiousness are significantly related with imposter syndrome in university students. Furthermore, family income and neuroticism also predict imposter syndrome in students. Family functioning acts as a moderator in relationship between openness to experience and imposterism.

Limitations and Suggestions

The authorities of some private universities did not allow for data collection consequently data was limited to only few universities and

there was a lack of diversity of socio-economic status. Information was collected by using self-report questionnaire. Information collected from the participants could not be validated from any other source. Cross sectional research design was used. Personality traits, family functioning, and imposterism should be studied by using longitudinal research design.

Future Implications

The findings of the current study will be helpful in identifying and dealing with the predictors of imposterism such as unhealthy family patterns and neuroticism. Psychotherapy such as family therapy and cognitive behavior therapy could be provided to reduce experience of negative emotional states for prevention and development of imposterism in young adults. Awareness and guidance can be provided to families and youth regarding dysfunctional family patterns and negative personality traits which could be dealt with beforehand. It will help in reducing psychological problems and imposterism.

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